

# Work Order ID 53816

November 18, 2009 2:58:59 PM



Page 1

Item ID: D4010-1

Accept



Setup Start



Revision ID:

Item Name: Bearpaw

Stop



Start Date: 11/18/2009 Start Qty: 9.00



Cust Item ID:

Required Date: 11/25/2009 Req'd Qty: 9.00



Customer:

Reference:

Approvals:

Process Plan: YMF

Date: 09-11-19

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D4010	C

100

0.00



HAND FINISHING THERMOFORMING

Thermoform

Memo

0.00

Thermoforming Machine

Cut Blanks to fit frame size

(P18) →

BB 09/11/20

(X9)

110

0.00



THERMOFORMING MACHINE

Thermoform

Memo

0.00

Thermoforming Machine

Thermoform as per Dwg. D4010-1 and Folio FTA067 temp using tool DT 9540

Dwg. Rev. C

Folio Rev. B

9

BB 09/11/20

120

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

Visually inspect for proper formation of each part

9

BB 09/11/20

BB 09/11/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D4010-1 <sup>-D4010-041 → D407-559-113</sup> PAR #: \_\_\_\_\_ Fault Category: Thermo Seaming NCR: Yes No DQA: / Date: 05/11/27  
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: / Date: 05/11/27

NCR: <u>53866</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>01/11/24</u>	<u>100</u>	<u>Qty x1 part was <del>over</del> heated and caused large blister along the side of the part.</u>	<u>[Signature]</u>	<u>→ Scrap and destroy AND Replng qty x1 M# M113108</u>	<u>[Signature]</u> <u>05/11/24</u> <u>[Signature]</u> <u>01/11/24</u>	<u>S</u> <u>01/11/24</u>	<u>[Signature]</u>	<u>S</u> <u>02/11/24</u>
		<u>R.C. first part/process</u>	<u>[Signature]</u>	<u>- Re adjust temperature.</u>			<u>[Signature]</u>	

NOTE: Date & initial all entries

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Cust Item ID:

Required Date: 11/25/2009 Req'd Qty: 9.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

02/11/20 (X9)

140

HAND FINISHING THERMOFORMING

0.00



Thermoform

Memo

0.00

Thermoforming Machine

Trim to Finished Dimensions as per dwg D4010-1  
Drill as per j.g DT 9542

PTO 09/11/23

(X9) 09/11/23

150

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

Check dimensions to ensure conformity to drawing tolerances.

09/11/24 (X9)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
01/11/24	140.	DRILL - wearplate holes using jig DT 9542. D4010-041 routings and D4010-1 routings will be corrected to resolve this issue.	WJ	09/11/24	9	all. 24	S 02/11/24

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 53816

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Item ID: D4010-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Bearpaw

Start Date: 11/18/2009 Start Qty: 9.00



Cust Item ID:

Required Date: 11/25/2009 Req'd Qty: 9.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

170

Identify as per dwg & Stock Location:

THEZHOFORMING BB 09/11/24 (X9)



Packaging

Memo

0.00

Packaging

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/11/24 JF  
Mr  
09-11-24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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Page 1

Work Order ID: 53816

Parent Item: D4010-1

Parent Item Name: Bearpaw

Comments: IPP Rev B 09/11/03 Drawing changed to accomidate OEM and Dart Skidtube.  
DL. Verified by:DD.

Start Date: 11/18/2009

Required Date: 11/25/2009

Start Qty: 9.00

Required Qty: 9.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
M-ALXTRAB-S.300		Purchased	No			100	sf	1,065.611	67.3011			
Alextra ET 0 .300 sheet												

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

MAT

113108

1065.6112

1065.6112

9

09/11/20  
30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



DART AEROSPACE LTD	Work Order: 53816
Description:	Part Number: D4010-1
Inspection Dwg: D4010 Rev: C	Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

#### THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than <u>N/A</u>				
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by: JB

Date: 09/11/24

#### TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.0"	$\pm 0.100$	1.006"	✓			
<del>Ø 1.25"</del>	<del><math>\pm 0.13</math></del>	<del>Ø 1.26"</del>	<del>✓</del>			
<del>Ø 0.375"</del>	<del><math>\pm</math></del>	<del>Ø 0.375"</del>	<del>✓</del>			

Measured by: JB

Date: 09/11/24

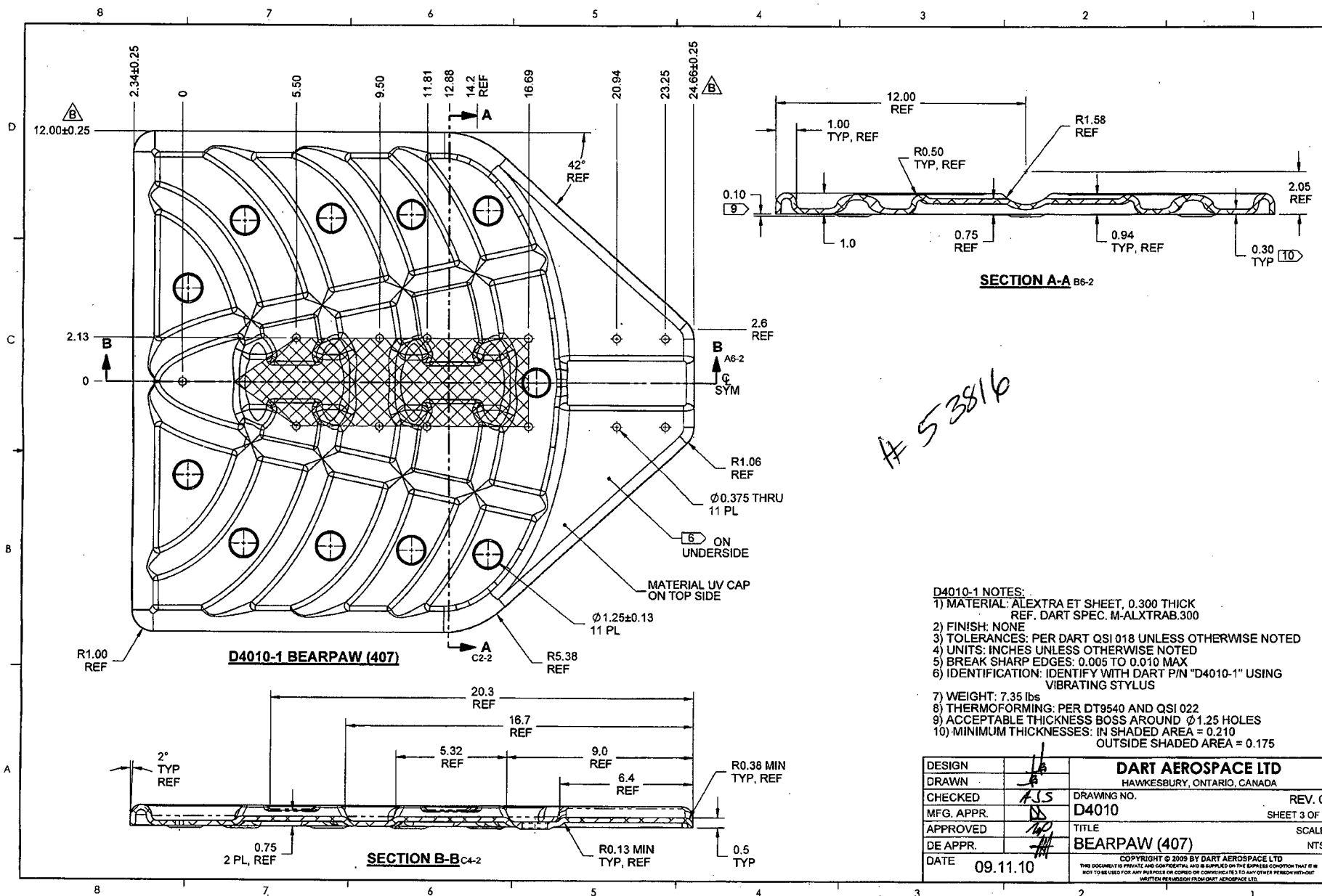
Audited by: MB

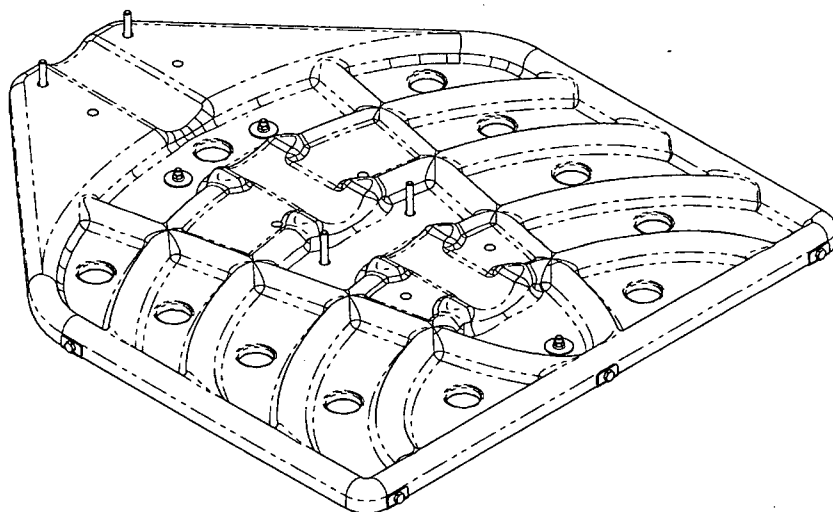
Date: 09/11/24

Prototype Approval:

Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/DL	





**D4010-041 BEARPAW ASSEMBLY (407)**

53816

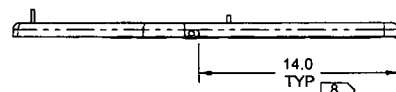
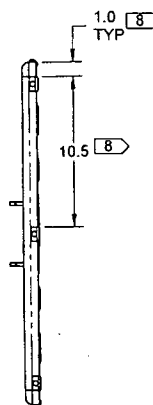
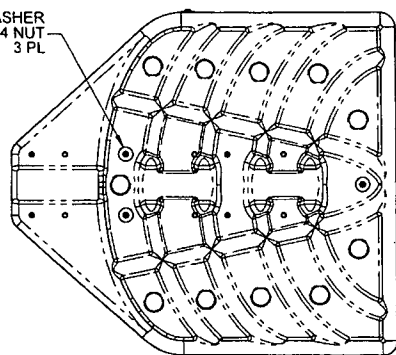
**RELEASED**  
2009-11-26  
M

C	OPTIMIZED DESIGN BASED ON FUNCTIONALITY AND TO EASE MANUFACTURING	MB	09.11.10
B	REDESIGNED; ADDED PROVISIONS FOR COMPATIBILITY WITH OEM SKIDTUBES/SADDLES; REDEFINED SOME TOLERANCE	MB	09.11.02
A	NEW ISSUE	MB	09.10.22
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.11.10		

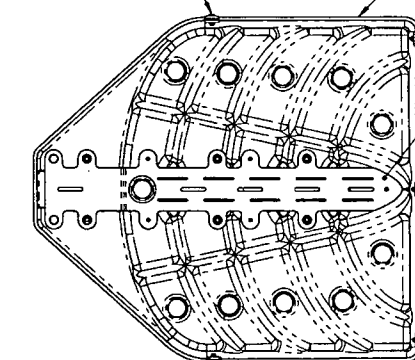
  

<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. <b>D4010</b>	REV. C SHEET 1 OF 3
TITLE <b>BEARPAW (407)</b>	SCALE NTS
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D3456-1 WASHER  
MS21043-4 NUT  
3 PL



AN3C5A BOLT  
D4015-041 WEARBAR  
MS21043-3 NUT



D4010-1  
BEARPAW

AN3C5A BOLT  
D4015-041 WEARBAR  
MS21043-3 NUT

D4013-041 WEARPLATE  
ASSEMBLY

AN3C5A BOLT  
D4015-041 WEARBAR  
MS21043-3 NUT

AN3C5A BOLT  
D4015-041 WEARBAR  
MS21043-3 NUT

AN3C5A BOLT  
D4015-041 WEARBAR  
MS21043-3 NUT

**D4010-041 BEARPAW ASSEMBLY (407)**

ITEM	QTY -041	P/N	DESCRIPTION
1	X	D4010-041	BEARPAW ASSEMBLY (407)
3	3	D3456-1	WASHER
4	1	D4010-1	BEARPAW
5	1	D4013-041	WEARPLATE ASSEMBLY
6	5	D4015-041	WEARBAR
21	5	AN3C5A	BOLT
22	5	MS21043-3	NUT
23	3	MS21043-4	NUT

# D4010-041 NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART OSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 9.41 lbs
- 8) LOCATE D4015-041 (ITEM 5) AS SHOWN AND TRANSFER DRILL Ø0.191" HOLE FROM D4015-041 TO D4010-1 BEARPAW AND FASTEN USING PRESCRIBED HARDWARE.
- 9) TORQUE: AN3 NUTS = 15-20 in-lb  
AN4 NUTS = 50-70 in-lb

DESIGN	1	<b>DART AEROSPACE LTD</b>	
DRAWN	A	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A/S	DRAWING NO.	REV. C
MFG. APPR.	B	D4010	SHEET 2 OF 3
APPROVED	42	TITLE	SCALE
DE APPR.	#	BEARPAW (407)	NTS
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2009-11-24

53816

